Application No. 10/518,815 Amendment Dated March 6, 2008 Reply to Advisory Office Action of February 19, 2008

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (currently amended) A compound of formula (I):

in which:

X is N-or NH;

Y is :CH, CO, CH₂ or :CNR²R³, where R² and R³ are independently hydrogen, C_{1-6} alkyl or C_{3-6} cycloalkyl;

R is aryl or heteroaryl optionally substituted by halogen, amino, hydroxy, cyano, nitro, trifluoromethyl, carboxy, $CONR^5R^6$, $SO_2NR^5R^6$, SO_2R^4 , $NHSO_2R^4$, $NHCOR^4$, ethylenedioxy, methylenedioxy, C_{1-6} alkyl, C_{1-6} alkoxy, SR^4 or NR^5R^6 where R4 is hydrogen, C_{1-6} alkyl or C_{3-6} cycloalkyl, R^5 and R^6 are independently hydrogen, C_{1-6} alkyl or together with the nitrogen atom to which they are attached form a 5- or 6-membered saturated ring optionally containing a further O, S or NR^4 group;

or R is C₁₋₆ alkyl or C₃₋₆ cycloalkyl,

 R^1 is a group $Y(CH_2)pR^7$ where p is 0, 1 or 2 and Y is O or NR^8 where R^8 is hydrogen, $C_{1.6}$ alkyl or $C_{3.6}$ cycloalkyl;

and R⁷ is a 5- or 6-membered saturated ring containing one or more O, S or N atoms, aryl or a heteroaryl group containing one to four heteroatoms selected from O, S or N, the saturated ring, aryl and heteroaryl groups all being optionally substituted by halogen, amino, hydroxy, cyano, nitro, trifluoromethyl, carboxy, CONR⁵R⁶, SO₂NR⁵R⁶, SO₂R⁴, NHSO₂R⁴, NHCOR⁴, C₁₋₆ alkyl, C₁₋₆ alkoxy, SR⁴ or NR⁵R⁶ where R4 is hydrogen, C₁₋₆ alkyl or C₃₋₆ cycloalkyl, R⁵ and R⁶ are independently hydrogen, C₁₋₆ alkyl or together with the nitrogen atom to which they are attached form a 5- or 6-membered saturated ring optionally containing a further O, S or NR⁴ group;

or R¹ is a group NR⁰R¹⁰ where R⁰ and R¹⁰ are independently hydrogen or C₁.6 alkyl, or R⁰ and R¹⁰ together with the nitrogen atom to which they are attached form a 5 or 6-membered saturated ring optionally containing a further O, S or N atom and optionally substituted by a second NR⁰R¹⁰ where R⁰ and R¹⁰ are independently hydrogen or C₁.6 alkyl or R⁰ and R¹⁰ together with the nitrogen atom to which they are attached form a 5 or 6-membered saturated ring optionally containing a further O, S or NR⁴, CO₂C₁.6 alkyl, CONR¹¹R¹² where R¹¹ and R¹² are independently hydrogen or C₁.6 alkyl, aryl or heteroaryl group optionally substituted by halogen, amino, hydroxy, cyano, nitro, trifluoromethyl, carboxy, CONR⁶R⁶, SO₂NR⁶R⁶, SO₂R⁴, NHSO₂R⁴, NHCOR⁴, C₁.6 alkyl, C₁.6 alkoxy, SR⁴ or NR⁶R⁶ where R⁴ is hydrogen, C₁.6 alkyl or C₃.6 cycloalkyl, R⁵ and R⁶ are independently hydrogen, C₁.6 alkyl or together with the nitrogen atom to which they are attached form a 5- or 6-membered saturated ring optionally containing a further O, S or NR⁴ group;

and pharmaceutically acceptable salts or solvates thereof.

Claim 2. (previously presented) A compound according to claim 1 in which X is N and Y is :CH.

Claim 3. (previously presented) A compound according to claim 1, wherein R is C_{1-4} alkyl, or phenyl substituted by halogen, SO_2Me , C_{1-6} alkoxy or C_{1-4} alkyl.

Claim 4. (previously presented) A compound according to claim 1, wherein R^1 is a group $Y(CH_2)pR^7$ where p is 0 and Y is NR^8 where R^8 is hydrogen and R^7 is substituted phenyl.

Claim 5. (previously presented) A compound according to claim 1, wherein R¹ is NR⁹R¹⁰ where R⁹ and R¹⁰ are hydrogen or C₁₋₃ alkyl or together with the nitrogen atom to which they are attached form a 5 or 6-membered saturated ring optionally containing a further O, S or NR⁴.

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Claim 6. (previously presented)
                                     A compound selected from:
1-[9-(4-Chlorophenyl)-2-cyano-9H-purin-6-yl]-L-prolinamide,
9-(4-Chlorophenyl)-6-(4-pyrrolidin-1-ylpiperidin-1-yl)-9H-purine-2-carbonitrile,
9-(4-Chlorophenyl)-6-[(3-pyrrolidin-1-ylpropyl)amino]-9H-purine-2-carbonitrile,
6-(4-Aminopiperidin-1-yl)-9-(4-chlorophenyl)-9H-purine-2-carbonitrile,
6-[(2-Aminoethyl)amino]-9-(4-chlorophenyl)-9H-purine-2-carbonitrile,
9-(4-Chlorophenyl)-6-(dimethylamino)-9H-purine-2-carbonitrile,
9-(4-Methylphenyl)-6-pyrrolidin-1-yl-9H-purine-2-carbonitrile,
9-(4-Methoxyphenyl)-6-pyrrolidin-1-yl-9H-purine-2-carbonitrile,
9-(4-chlorophenyl)-6-pyrrolidin-1-yl-9H-purine-2-carbonitrile,
9-(4-Chlorophenyl)-6-(ethylamino)-9H-purine-2-carbonitrile,
tert-Butyl 4-[9-(4-chlorophenyl)-2-cyano-9H-purin-6-yl]piperazine-1-carboxylate,
9-(4-Chlorophenyl)-6-piperazin-1-yl-9H-purine-2-carbonitrile,
9-(2-Chlorophenyl)-6-morpholin-4-yl-9H-purine-2-carbonitrile
9-(3,4-Difluorophenyl)-6-morpholin-4-yl-9H-purine-2-carbonitrile,
9-(4-Isopropylphenyl)-6-morpholin-4-yl-9H-purine-2-carbonitrile,
9-(4-Methoxyphenyl)-6-morpholin-4-yl-9H-purine-2-carbonitrile,
9-(3-Chlorophenyl)-6-morpholin-4-yl-9H-purine-2-carbonitrile,
9-[4-(Methylsulfonyl)phenyl]-6-morpholin-4-yl-9H-purine-2-carbonitrile,
6-[(4-Chlorophenyl)amino]-9-ethyl-9H-purine-2-carbonitrile,
9-(4-Chlorophenyl)-6-morpholin-4-yl-9H-purine-2-carbonitrile,
8-Amino-6-[(4-chlorophenyl)amino]-9-ethyl-9H-purine-2-carbonitrile,
8-Amino-9-(4-chlorophenyl)-6-morpholin-4-yl-9H-purine-2-carbonitrile.
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9-(4-Chlorophenyl)-6-morpholin-4-yl-8-oxo-8,9-dihydro-7H-purine-2-carbonitrile, 9-(4-Chlorophenyl)-8-(dimethylamino)-6-morpholin-4-yl-9H-purine-2-carbonitrile,

and pharmaceutically acceptable salts thereof.

Claim 7. (cancelled)
Claim 8. (cancelled)
Claim 9. (cancelled)

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Claim 10. (previously presented) A pharmaceutical composition which comprises a compound of the formula (I) as defined in claim 1 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable diluent or carrier.

Claim 11. (previously presented) A method for producing inhibition of at least one cysteine protease chosen from cathepsins S, K, L, F and B in a mammal comprising administering to said mammal an effective amount of a compound as defined in claim 1, or a pharmaceutically acceptable salt thereof.

Claim 12. (previously presented) A method for treating pain in a mammal in need of such treatment comprising administering to said mammal an effective amount of a compound as defined in claim 1, or a pharmaceutically acceptable salt thereof.

Claim 13. (previously presented) A method for inhibiting Cathepsin S in a warm blooded animal comprising administering a compound of the formula (I) as defined in claim 1 or a pharmaceutically acceptable salt thereof to a warm blooded animal.

Claim 14. (previously presented) A pharmaceutical composition which comprises a compound of the formula (I) as defined in claim 6 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable diluent or carrier.

Claim 15. (previously presented) A method for producing inhibition of at least one cysteine protease chosen from cathepsins S, K, L, F and B in a mammal comprising administering to said mammal an effective amount of a compound as defined in claim 6, or a pharmaceutically acceptable salt thereof.

Claim 16. (previously presented) A method for treating pain in a mammal in need of such treatment comprising administering to said mammal an effective amount of a compound as defined in claim 6, or a pharmaceutically acceptable salt thereof.

Claim 17. (previously presented) A method for inhibiting Cathepsin S in a warm blooded animal comprising administering a compound of the formula (I) as defined in claim 6 or a pharmaceutically acceptable salt thereof to a warm blooded animal.